

CLAIMS

1. A device control method in a system constituted by connecting a unit including at least one of an input plug for signal input and an output plug for signal output, and a subunit having at least one of a destination plug for
5 inputting a signal and a source plug for signal output to a bus, comprising the steps of:

a) issuing a command, to the unit connected to the bus or the subunit included in the unit, for detecting the input plug or the source plug as their signal source; ; and

10 b) receiving the result of detection issued from the unit or the subunit receiving the command.

2. A device control method in a system constituted by connecting a unit including an output plug for signal output to a bus, comprising the steps
15 of:

a) issuing a command for detecting an input plug or a source plug as a signal source of a designated output plug, to the unit connected to the bus; and

b) receiving the result of detection issued from the unit receiving the command.

20 3. A device control method in a system constituted by connecting a unit including an input plug for signal input and an output plug for signal output to a bus, comprising the steps of:

a) detecting a signal in a specific channel of the bus; and

25 b) receiving information showing a virtual output state from the output plug in the specific channel from a specific unit connected to a specific bus,

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wherein a relation between the specific unit and another unit is shown by the information showing the virtual output state.

4. The device control method of claim 3, further comprising the steps

5 of:

c) recognizing that a first unit connected to the bus is issuing a signal;

d) checking if a second unit is issuing the information showing the virtual output state or not in a third unit connected on the bus; and

10 e) requesting the third unit to process the signal issued by the first unit as the signal issued from the second unit.

5. The device control method of claim 4,

wherein a specific unit other than the first unit is receiving the signal issued from the first unit.

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6. A device control method in a system constituted by connecting a unit including at least one of an input plug for signal input and an output plug for signal output, and a subunit having at least one of a destination plug for signal input and a source plug for signal output to a bus, comprising at least one of the steps of:

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a) requesting the output plug of the unit to set the source plug of the subunit included in the unit as a signal source;

b) requesting the destination plug of the subunit to set the input plug of the unit as the signal source;

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c) requesting the output plug of the unit to set the input plug of the unit as the signal source; and

d) requesting the destination plug of the subunit to set the source plug

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of the subunit as the signal source.

7. A device control method in a system constituted by connecting a unit including at least one of an input plug for signal input and an output plug for signal output, and a subunit having at least one of a destination plug for signal input and a source plug for signal output to a bus, comprising:

at least one of the steps of

a) requesting a destination plug of a subunit included in a first unit to set an input plug of the first unit as a signal source, and

b) requesting an output plug of the first unit to set the input plug of the first unit as a signal source; and

at least one of the steps of

c) requesting an output plug of the second unit to set a source plug of a subunit included in the second unit as the signal source, and

d) requesting the output plug of the second unit to set the input plug of the second unit as the signal source; and

the step of

e) requesting the input plug of the first unit and the output plug of the second unit to connect each other, after the steps a) to d).

8. The device control method of claim 1, further comprising the step of:

c) obtaining information showing whether a further subunit is present or not on a path from the output plug or the source plug as the signal source obtained as the detection result to the input plug of the unit or the destination plug of the subunit.

9. The device control method of claim 1, further comprising the step of:

- c) obtaining information showing whether the first signal is processed or not on a path from the output plug or the source plug as the signal source
5 obtained as a detection result to the input plug of the unit or the destination plug of the subunit.

10. The device control method of claim 9, further comprising the steps of:

- d) obtaining information that the first signal is a multiplexed signal of the signals including plural program contents, and

- e) obtaining information showing whether a signal showing a part of the program contents out of the multiplexed signal is extracted or not, on the path from the output plug or the source plug as the signal source obtained as
15 the detection result to the input plug of the unit or the destination plug of the subunit.

11. The device control method of claim 9, further comprising the steps of:

- d) obtaining the information that the first signal includes video data, and

- e) obtaining information showing whether data is added or not to display the contents other than the video data of the first signal, to the video data of the first signal, on the path from the output plug or source plug as the
25 signal source obtained as the detection result to the input plug of the unit or the destination plug of the subunit.

12. The device control method of claim 6, further comprising the step of:

- e) obtaining information showing whether a further subunit is present or not on a signal path connecting the plug and the signal source set at the steps of a), b), c), and d), from the unit or the subunit.

13. The device control method of claim 6, further comprising the step of:

- f) obtaining information showing whether the signal is processed or not on a signal path connecting the plug and signal the source set at the steps of a), b), c), and d), from the unit or the subunit.

14. The device control method of claim 13, further comprising the steps of:

- g) obtaining information showing whether the signal on the signal path is a multiplexed signal including plural program contents or not, and
h) obtaining information showing whether a signal including a part of the program contents out of the signal is extracted or not on the signal path when the signal is known to be the multiplexed signal including plural programs at the step f).

15. The device control method of claim 13, further comprising the steps of:

- i) obtaining information showing whether the signal on the signal path includes video data or not; and
j) obtaining information showing whether data is added or not to display contents other than video data of the signal, on the video data of the

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signal, on the signal path when the signal is known to include video data at the step f).

16. A device control method in a system constituted by connecting a
5 unit including at least one of an input plug for signal input and an output plug for signal output , and a subunit having at least destination plug for signal input and a source plug for signal output to a bus, comprising the steps of:

a) issuing a command for designating the source plug of the subunit as the signal source, to at least one of the output plug of the unit and the
10 destination plug of the subunit included in the unit;

b) establishing a signal path between the source plug designated as the signal source and at least one of the output plug of the unit and the destination plug of the subunit; and

c) obtaining information showing whether the signal issued from the
15 source plug of the subunit is entered from the destination plug of the subunit or not, from at least one of the unit and the subunit.

17. The device control method of claim 6, further comprising the step of:

20 e) when the signal source set at the steps a), b), c), and d) receives a further signal from a further signal source and issues the further signal as it is, obtaining the information that the further signal is issued as it is, from at least one of the unit and the subunit.

25 18. A device control method in a system constituted by connecting a plurality of units including an input plug for signal input and an output plug for signal output to a bus, comprising the steps of:

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a) issuing a command from a first unit to a second unit to request a point-to-point connection between the second unit and a unit other than the second unit; and

b) establishing point-to-point connection between the second unit and
5 the unit other than the second unit according to the command.

19. The device control method of claim 18, wherein the command requesting the point-to-point connection includes information for specifying a unit as an object of the point-to-point connection.

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20. The device control method of claim 18, wherein the second unit receiving a command for requesting to establish the point-to-point connection establishes point-to-point connection with the first unit issuing the command for requesting to establish the point-to-point connection.

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21. The device control method of claim 18, wherein the command for requesting to establish the point-to-point connection includes information for specifying a plug as an object of the point-to-point connection.

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22. The device control method of claim 18, further comprising the step of:

c) checking if the second unit receiving the command for requesting to establish the point-to-point connection already establishes or not in the point-to-point connection with a partner other than the partner of the point-to-point connection already designated by the command, and if established,
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1) cutting off the already established point-to-point connection from the second unit; and

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2) establishing a point-to-point connection between the second unit and the designated partner of the point-to-point connection.

23. The device control method of any one of claims 1 to 22, wherein
5 the bus is an IEEE1394 bus.

24. A program recording medium recording a program for allowing a computer to execute the steps of the method in any one of claims 1 to 23.

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